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| https://lh6.googleusercontent.com/ENp5iVIZzIHv2b4n4mkS4vHt4UkEBlWYmz738CY-LLW4hqPglKHQ6jUh7UR0d4Ymmrr709Maa1nSxWlKGCsAkajArO1QhFOMQzxwHhEhk0zqlMRi4_H7oj2RIxwzkiz_qKiY_Giy | **Work Integrated Learning Programmes Division**  **M.Tech (Data Science and Engineering)** |

**Data Visualization & Interpretation   
(DSECL ZG555)**

**First Semester, 2021-22**

**Assignment 1 – PS3 - [ROAD SAFETY DATA ANALYSIS] - [Weightage 12%]**

1. **Problem Statement**

How should India -- the otherwise warm and hospitable -- respond to anxiety on roads in the New Year? How should we rank in complying with traffic laws, exercising cautiousness while driving or being courteous to others on the road in 2019?

Ford’s recently concluded road safety survey - covering 10 cities - tried unravelling the behaviour and attitude of the average Indian road user. It gives us answers to these questions and urges Indian road users to say No to Indifference and lack of caution for a safe 2019.

A total of 1,613 interviews (based on stratification of representative sampling) were conducted across 10 cities, each with a million-plus population. Each city was divided into five zones (East, West, North, South and Central) and respondents were interviewed from each zone to ensure a fair representation across a city.

Forty-eight percent of the respondents were private (non-commercial) drivers while 52 percent were passengers and pedestrians. Demographic divide consisted of 72 percent of responses from men and 28 percent from women.

**Detailed findings of the Ford Courtesy Survey can be found** [here](https://www.india.ford.com/about-ford/media/newsroom/2018/ford-cartesy-survey-urges-indian-road-users-to-usher-in-a-safe-2019/)

**Data preparation has to be done**. If required, feel free to make proper assumptions about the data and the analysis process to be followed. Don’t forget to mention the assumptions at the right places.

You have been consulted to present these survey results to **the Police Commissioner Office** of various cities. With the given context, you need to create a dashboard using TABLEAU. (Use the concepts learned in the class)

**The objectives include**

**Demonstrate the VISUALISATION CONTEXT**

1. **WHO?KNOW YOUR AUDIENCE(First Question is answered for you)**
2. List the primary groups or individuals to whom you’ll be communicating.

## Police Commissioner Office

1. If you had to narrow that to a single person, who would that be?
2. What does your audience care about?
3. What action does your audience need to take?
4. What is at stake? What is the benefit if the audience acts in the way you want them to? What are the risks if they don’t?
5. **WHAT?**

* What are you trying to communicate? What questions are you trying to answer/display in your visualizations? Write these as specific questions. You need to come up with 3 questions at least, each of which will be answered using one Viz.
* **Data preparation needed to answer the specific queries must be done.**

1. **Present the BIG IDEA**.

* It should: (1) articulate your point of view, (2) convey what’s at stake, and (3) be a complete (and single!) sentence.

1. **HOW?**
   1. Chart 1: What type of viz did you create? Why did you select the viz that you did?
   2. Chart 2: What type of viz did you create? Why did you select the viz that you did?
   3. Chart 3: What type of viz did you create? Why did you select the viz that you did?
   4. For each of the Visualisation, identify at least 3 Gestalt principles employed.
   5. For each of the Visualisation, mention how you strategically used pre-attentive attributes to draw the audience's attention.
2. **Create your dashboard**
3. **Deliverables**

Zipped file containing

1. The word doc with answers to question 1 through 4 above.
2. The tableau workbook(.twbx) with 3 Sheets(Each sheet should have 1 visual) and 1 Dashboard comprising all three visuals.
3. The source file after preprocessing(if any).

The file name should be the respective group name.

1. **Deadline**

* The strict deadline for submission of the assignment is **< December 26, 2021> EoD.**
* Late submissions won’t be evaluated.

1. **How to submit**

* This is a group assignment.
* All members of the group will work on the same problem statement.
* Each group should zip the deliverables and upload in CANVAS in respective locations under ASSIGNMENT Tab.
* Assignment submitted via means other than through CANVAS will not be graded

1. **Evaluation**

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| **Sl. No** | **Criteria** | **Description** |
| 1 | Know your audience.  (10%) | * Getting to know our audience and understanding their needs and what drives them is an important early part of the process for successfully communicating with data. |
| 2. | WHAT?  Effective Formulation of Contextual Questions  (25%) | * Identify what needs to be communicated very clearly and frame the questions accordingly justifying the context. |
| 3 | BIG IDEA (10%) | * The Big Idea can help us get clear and succinct on the main message we want to get across to our audience |
| 4 | Choice of appropriate visuals  (25%) | * Identify the appropriate visuals for communicating the message |
| 5 | No clutter in the visuals  (10%) | * The visuals presented should not have any unwanted elements that reduces the understanding of data |
| 6 | Audience attention  (10%) | * The visuals presented should have the right kind of visual cues that helps the audience to focus the attention wherever required. |
| 7 | Dashboard in Tableau  (10%) | * Use Principles of Effective Dashboard Design to come up with an interesting Dashboard |

**ALL GROUP MEMBERS WILL BE CREDITED THE SAME MARKS. ITS INDIVIDUAL’S RESPONSIBILITY TO ENSURE HIS/HER PARTICIPATION AS WELL AS TEAM’S RESPONSIBILITY TO ENSURE EVERYONE’S PARTICIPATION.**